

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) ~~An apparatus~~ Apparatus (10; 20; 70; 90; 100) comprising a level shifter (15; 75; 95; 103) connectable to a signal input (1; 31; 71; 91) for receiving an input signal (s(t)) with a negative signal swing, said level shifter (15; 75; 95; 103) providing for a DC shift of said input signal (s(t)) to provide an output signal (r(t)) with positive signal swing, said level shifter (15; 75; 95; 103) comprising: an amplifier (17; 77) having a first input (11; 61), a second input (12; 62), and an output (13; 73), a first capacitor (C1), a second capacitor (C2; C2A, C2B to C2n), a reference voltage supply (16; 79), and a transistor (14; 74) serving as a switch, wherein said first capacitor (C1) is arranged between said signal input (1; 71; 91) and said first input (11; 61), said second capacitor (C2; C2A, C2B to C2n) is arranged in a feedback-loop (18) between the output (13; 73) and said first input (11; 61), said reference voltage supply (16; 79) is connectable to said second input (12; 62), and wherein said transistor (14; 74) is arranged in a branch (19; 69) that bridges the second capacitor (C2; C2A, C2B to C2n), whereby a control signal (CTRL) is applicable to a gate (14.1; 74.1) of said transistor (14; 74) in order to allow the level shifter (15; 75; 95; 103) to be reset from time to time.

2. (currently amended) The apparatus of claim 1, wherein the gain of the amplifier (17; 77) is adjustable by varying the effective capacitance of the capacitors (C2; C2A, C2B to C2n).

3. (currently amended) The apparatus of claim 2, wherein a branch that bridges the second capacitor is provided, said branch comprising a capacitor (C2B, C2n) in series with a switch (sb, sn), whereby the effective capacitance can be varied by opening or closing the switch (sb, sn).

4. (currently amended) The apparatus of claim 2, comprising an analog-to-digital converter ~~(80)~~ connectable to the output ~~(73)~~ for determining the voltage level at the output ~~(73)~~, and a controller ~~(78; 96)~~ for receiving digital information from the analog-to-digital converter ~~(80)~~, said digital information representing the voltage level, said controller ~~(78; 96)~~ providing a signal to adjust the effective capacitance.

5. (currently amended) The apparatus of claim 1, comprising a digital-to-analog converter ~~(79)~~ serving as reference voltage supply, said digital-to-analog converter ~~(79)~~ preferably receiving a digital signal from a controller ~~(78; 96)~~.

6. (currently amended) The apparatus of claim 1, comprising a bias current source ~~(21; 93)~~ with a network having a plurality of transistors ~~(P1, P2, P3)~~, resistors ~~(R1, R2)~~, and a reference current source ~~(22)~~.

7. (currently amended) The apparatus of claim 6, wherein one of the transistors is a cascode transistor ~~(P3)~~ which is arranged with respect to one of the other transistors ~~(P2)~~ so as to absorb any voltage beyond a supply voltage ~~(V_{supply})~~, if the input signal ~~s(t)~~ at falls below 0V.

8. (currently amended) The apparatus according to claim 1, further comprising ESD protection means ~~(92)~~ being adapted to handle negative voltage swings at the signal input ~~(91)~~.

9. (currently amended) The apparatus of claim 8, wherein the ESD protection means ~~(92)~~ comprise a first diode ~~(DP2)~~, a second diode ~~(DP1)~~, and a third diode ~~(DCL1)~~, said first diode ~~(DP2)~~ being situated between the signal input ~~(91)~~ and a supply node ~~(101)~~, said second diode ~~(DP1)~~ being situated between the supply node ~~(101)~~ and a substrate ~~(102)~~, and said third diode ~~(DCL1)~~ being situated between the supply node ~~(101)~~ and the substrate ~~(102)~~.